

# Remedial and Restoration Actions to Date

Below is a brief summary of remedial and restoration actions in Subarea 1 (the upper five miles) of Silver Bow Creek. ARCO, under EPA direction, led previous efforts to clean up some waste areas above the upper end of the SSTOU, including the historic Colorado Tailings area, and those activities will continue as part of the Butte Priority Soils Operable Unit remedy.

## 1999-2000, First Mile of Stream

DEQ initiated cleanup activities (called remedial actions) at the upper end of Silver Bow Creek in 1999 by removing streamside tailings to a local repository and reconstructing the stream channel. Revegetation was also planned for this section using both remediation and restoration funding sources.



## 2001-2002, Miles 2 & 3 of the Stream

DEQ modified remediation plans for the next two miles of construction to provide for additional benefits, partially made possible by the availability of Restoration Grants. Components of the project of particular note during this construction season included the following:

- ▶ Contractors loaded tailings on train cars for transport to a regional repository at the Opportunity Ponds near Anaconda, simplifying long-term waste management challenges and providing cost savings.
- ▶ Using Restoration Grants, contractors planted denser stands of willows on streambanks and a greater number of trees, shrubs, and grass plugs over a wider area in the floodplain.
- ▶ NRDP funded the Greenway Trail which was integrated into the overall Superfund project (see related story).



## 2002-2003, Miles 4 & 5 of the Stream

Continuing downstream, project contractors are reconstructing the stream in the lower two miles of Subarea 1. In addition to designing features that appeared in prior years, project engineers added restoration elements in this section of the stream that enhanced fishery habitat, including increased pool density and logs placed along the banks and in the bed of the stream.



## Subarea 2 - Current Design

DEQ and NRDP personnel and their contractors are currently preparing design plans for remediating Subarea 2, the portion of Silver Bow Creek stretching from the town of Silver Bow to near the head of Durant Canyon (see map). A substantial amount of work has been accomplished, including:

- ▶ Contractors excavated 700 test pits during the summer of 2002 in this 340-acre area to characterize 1.6 million cubic yards of contaminants at the site.
- ▶ Project engineers identified near-by borrow areas to obtain clean backfill material.
- ▶ The 2002 Greenway grant approval enables DEQ to remove the entire Ramsay Flats tailings deposit, allowing establishment of a more natural stream channel and floodplain as well as providing a more permanent remedy.
- ▶ Project engineers and ecologists completed a channel stability analysis and conceptual design of Silver Bow Creek in Subarea 2 to evaluate the existing stream condition and additional restoration elements needed to provide a more natural, longer, and more stable channel in this reach of the stream.
- ▶ Engineers designed a finer-grained, typical bed material for the streambed that allows a more diverse aquatic habitat, and up to 30 acres of open water wetlands to provide more waterfowl habitat.

